WHAT IS CLAIMED IS:

1. A structure of terminal electrodes of a surface mounted resettable over-current protection device, comprising:

a raw material substrate having two ends, on each of the both surfaces of which a patterned metal foil is formed;

an insulating layer, enclosing the raw material substrate, having cut sections of the patterned metal foils on two ends of the raw material substrate be exposed;

two terminal electrodes, arranged on the both ends of the raw material substrate, each of the two terminal electrodes having five conducting surfaces for enclosing the insulating layer and the cut sections of the patterned conducting metal foil exposed on the two ends of the raw material substrate, and electrically connected to the exposed patterned conducting metal foil.

2. The structure as claimed in claim 1, wherein the raw material substrate has at least a polymer positive temperature coefficient material layer.

3. The structure as claimed in claim 1, wherein the raw material substrate is formed by pressing the polymer positive temperature coefficient layer and multiple conducting metal foil layers which are alternately stacked on each other.

4. The structure as claimed in claim 3, wherein the raw material substrate is preferably formed by pressing three polymer positive temperature coefficient layers and four conducting metal foil layers which are stacked on one other.

5. The structure as claimed in claim 1, wherein the patterned conducting metal foil covers part of the raw material substrate, and the ends of the raw material substrate are exposed.

6. The structure as claimed in claim 1, wherein the insulating layers covering the edges of the raw material substrate are used to electrically insulate the patterned conducting metal foil layers from the terminal electrodes.

7. The structure as claimed in claim 1, wherein each terminal electrode further comprising:

a conducting paste, arranged on one ends of the raw material substrate and electrically connected to the exposed cut section of the patterned conducting metal foil; and

a soldering layer, including a nickel layer and a tin/lead alloy layer and arranged on and electrically connected to the conducting paste.

8. A method of manufacturing a surface mounted resettable over-current protection device, comprising the steps of:

providing a raw material substrate having two ends, on each of the two ends of which a patterned conducting metal foil is arranged;

cutting the raw material substrate to form a grid-shaped substrate having a plurality of strip-shaped structural parts;

forming an insulating layer, the insulating layer enclosing the grid-shaped substrate, and allowing parts of the patterned metal foils adjacent to the both ends of the strip-shaped structural parts to be exposed.

cutting the strip-shaped structural parts of the grid-shaped substrate into

a plurality of chips, each of the chips having two cut sections; and

forming two terminal electrodes on the two cut sections, respectively, the two terminal electrodes enclosing the insulating layer and the two cut sections exposing parts of the patterned conducting metal foils, the two terminal electrodes electrically connected to the two cut sections which exposes the parts of the patterned conducting metal foils.

9. The method as claimed in claim 8, wherein the raw material substrate has at least a polymer positive temperature coefficient material layer.

10. The method as claimed in claim 8, wherein the raw material substrate is formed by pressing the polymer positive temperature coefficient material layer and multiple conducting metal foil layers which are alternately stacked on each other.

11. The method as claimed in claim 10, wherein the raw material substrate is preferably formed by pressing three polymer positive temperature coefficient material layers and four conducting metal foil layers which are alternately stacked on each other.

12. The method as claimed in claim 8, wherein the patterned conducting metal foils have a plurality of trenches to divide the patterned conducting metal foils into a plurality of regions.

13. The method as claimed in claim 8 or 12, wherein the insulating layer is added to the trenches to electrically insulate the terminal electrodes from the patterned conducting metal foils.

14. The method as claimed in claim 8, wherein the insulating layer is formed by a dipping or printing process.

15. The method as claimed in claim 8, further comprising the steps of:

coating a conducting paste on the two ends of the raw material substrate, the conducting paste electrically connected to one cut section which exposes the parts of the patterned conducting metal foils; and

forming a soldering layer on and electrically connected to the conducting paste, the soldering layer including a nickel layer and a tin/lead alloy layer.

16. The method as claimed in claim 15, wherein the soldering layer is formed by electroplating.